Date encoding

Current status in the draft for EAC-CPF 2.0

Three main date elements

EAC-CPF has three main elements to encode single dates, date ranges, and a combination of both. In most cases, these three elements are available alongside, but mutually exclusive to each other. <dateSet> itself is the only case where <date> and <dateRange> can be used together and repeatedly.

Only <date> and <dateRange> in...	**<date>, <dateRange>, and <dateSet> in...**
<localControl>, <dateSet>	<existDates>, <relation>, <useDates>, <otherEntityType>, <function>, <legalStatus>, <localDescription>, <mandate>, <occupation>, <place>, <chronItem>

Attributes with single date elements

Attribute	**<date>**	**<fromDate>**	**<toDate>**
@audience	x	x	x
@id	x	x	x
@target	x	x	x
@languageOfElement	x	x	x
@scriptOfElement	x	x	x
@conventionDeclarationReference **(new)**	x	x	x
@maintenanceEventReference **(new)**	x	x	x
@sourceReference **(new)**	x	x	x

@localType	x	x	x
@localTypeDeclarationReference **(new)**	x	x	x
@calendar **(adapted from EAD3's <date>)**	x	x	x
@era **(adapted from EAD3's <date>)**	x	x	x
@standardDate	x	x	x
@notBefore	x	x	x
@notAfter	x	x	x
@certainty **(adapted from EAD3's <date>)**	x	x	x
Attributes from any other namespace	x	x	x
@status **(new)**		x (with value "unknown")	x (with values "unknown" and "ongoing")

Attributes with date wrapper elements

<dateRange> and <dateSet> have the same set of attributes as the single date elements, with the exception of @calendar, @era, @standardDate, @notBefore, @notAfter, and @status.

Sub-elements of <dateRange>

<dateRange> requires either <fromDate> or <toDate> to be present, though both can be left empty. If both sub-elements are used, <fromDate> needs to appear before <toDate>.

Current differences in EAD3 and suggestions for alignment

Four date elements

EAD3, same as EAC-CPF, uses a set of three elements to encode single dates, date ranges, and a combination of both. However, in EAD3 the single date element in this trio is called <datesingle>, while an element called <date> is part of the mixed content model of EAD. Apart from the different scope and context, there also are some differences with regard to the attributes available for each of these elements.

<date> in...	**<datesingle> together with <daterange> and <dateset> in...**
<publicationstmt>, <ref>, <part>, <abstract>, <unittitle>, <physfacet>, <archref>, <bibref>, <p>, <event>, <item>, <entry>	<localcontrol> (only with <daterange>), <unitdatestructured>, <chronitem>, <dateset> (only with <daterange> and repeatable), <relation>
Attributes with <date>	**Attributes with <datesingle>**
@audience, @id, @lang[uageOfElement],	@audience, @id, @lang[uageOfElement],

@script[OfElement], *@altrender*, @localtype, @calendar, @era, @certainty, @normal, *@encodinganalog*	@script[OfElement], *@altrender*, @localtype, @notbefore, @notafter, @standarddate

<date> and <datesingle>

During the meeting on 20 April 2020, the EAD team already decided to move away from the four-elements model by removing the current <date> element as a separate element in mixed content contexts and by renaming the current <datesingle> to a "new" <date> following the EAC-CPF approach (see https://github.com/SAA-SDT/EAD3/issues/526). This means:

Element(s)	**In EAD3**	**Change/suggestion in EAD 4.0**
<chronItem>, <dateSet>, <localControl>, <relation>, and <unitDateStructured>	<datesingle>, <daterange>, and <dateset> (where applicable)	**Change:** <date>, <dateRange>, and <dateSet> (where applicable)
<abstract>, <p>, <event>, and <item>	<date> next to other elements in mixed content model	**Change:** Follow the general decision taken with regard to mixed content in these elements (i.e. removing <date> along with all other mixed content sub-elements and only using and <reference>)
<entry> and (the renamed) <reference>	<date> next to other elements in mixed content model	**Change:** Align with decision taken for the elements in the previous row
<publicationstmt>	<date> next to other elements in mixed content model	**Change:** Introduce the set of <date>, <dateRange>, and <dateSet> as optional sub-elements; i.e. <publicationstmt> is included in the group of elements in the first row of this table
<archref> and <bibref>	<date> next to other elements in mixed content model	**Decision:** Keep things as they are for the time being, but using the "new" <date> Consider a more general review in phase 2[1]

[1] E.g. do we still find it useful to have elements that specify a reference as being an archival respectively a bibliographic reference by using different element names? Would it be an option to enable the set of <date>, <dateRange>, and <dateSet> as sub-elements of the current parent elements of <archref> and <bibref>, i.e. <bibliography>, <otherFindAid>, <relatedMaterial>, and <separatedMaterial>?

<unittitle> and <physfacet>	<date> next to other elements in mixed content model	**Decision:** Keep things as they are for the time being, but using the "new" <date> Consider a more general review in phase 2
<part>	<date> next to other elements in mixed content model	**Decision:** Keep things as they are for the time being, but using the "new" <date> Consider a more general review in phase 2[2]

In all of the cases listed above, <date> will use the same attributes as in EAC-CPF (see details in the chapter on Attributes with single date elements above and in the following chapters). This will then also be in line with the attributes used for the other two single date elements, <fromDate> and <toDate>.

Attribute @status

As a follow-up to the decision taken with regard to <datesingle> and <date>, EAD 4.0 would follow EAC-CPF with the introduction of the new attribute @status for the single date elements (see https://github.com/SAA-SDT/EAD3/issues/527). EAC-CPF 2.0 currently foresees:

- @status with "unknown" and "open" for <toDate>
- @status with "unknown" for <fromDate>
- no @status attribute for <date>

Given that <date> might be used in some additional contexts in EAD, we suggest enabling the attribute @status with <date>, allowing for the value "unknown".

Attributes @calendar and @era

As a follow-up to the decision taken with regard to <datesingle> and <date>, EAD 4.0 would follow EAC-CPF and enable @calendar and @era with the single date elements <date>, <fromDate>, and <toDate> (see https://github.com/SAA-SDT/EAD3/issues/529).

Attribute @certainty

As a follow-up to the decision taken with regard to <datesingle> and <date>, EAD 4.0 would follow EAC-CPF and enable @certainty with the single date elements <date>, <fromDate>, and <toDate> along with ensuring the consistent use of @notBefore and @notAfter, i.e. adding this to the "new" <date> (see https://github.com/SAA-SDT/EAD3/issues/535).

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[2] <date> was only added to <part> in the release of EAD3 1.1.0 at the end of 2018, see https://github.com/SAA-SDT/EAD3/issues/505.

Normalised dates

Attributes @normal and @standardDate

In EAD3, both @normal and @standarddate are defined as xs:token. This means, that date ranges in the standardised format of "YYYY(-MM-DD)/YYYY(-MM-DD)" are valid on both contexts according to the schema (in RNG and XSD format) and a transfer from the old <date normal="..."> to the new <date standardDate="..."> should not cause any troubles.

In EAC-CPF, @standardDate was defined stricter, only allowing for single dates to be captured in a normalised form. However, EAC-CPF 2.0 now follows EAD in defining @standardDate as xs:token.

ISO standard

EAC-CPF 2.0 intends to follow the latest version of the ISO standard on dates, ISO8601:2019, which includes uncertain and approximate date qualifiers in the Extended Date/Time Format (EDTF). It is suggested that EAD 4.0 would follow EAC-CPF 2.0 in this.

Attributes with date wrapper elements

It is suggested that EAD 4.0 would follow EAC-CPF 2.0 with regard to the attributes used with the date wrapper elements <dateRange> and <dateSet>.

Sub-elements of <dateRange>

EAC-CPF 2.0 suggests for <dateRange> to require that at least one of the sub-elements <fromDate> and <toDate> is present, though both could be left empty. If both sub-elements are present, EAC-CPF 2.0 furthermore suggests that <fromDate> will have to be named first (see https://github.com/SAA-SDT/eac-cpf-schema/issues/180). The latter is already the case in EAD3 and it is recommended that EAD 4.0 would follow EAC-CPF 2.0 also with regard to the first.